



22763 U.S. PTO

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<b>UTILITY PATENT APPLICATION TRANSMITTAL</b>		<b>Attorney Docket No.</b> 121051-0006	
		<b>First Inventor</b> John KITCHING, et al	
		<b>Title</b> MICROMACHINED ALKALI-ATOM VAPOR CELLS	
<small>(Only for new nonprovisional applications under 37 CFR 1.53(b))</small>		<b>Express Mail Label No.</b> EL 699 957 895 US	
<b>APPLICATION ELEMENTS</b> <small>See MPEP chapter 600 concerning utility patent application contents.</small>		<b>ADDRESS TO:</b> Mail Stop Patent Application Commissioner for Patents P. O. Box 1450 Alexandria VA 22313-1450	
<p>1. <input checked="" type="checkbox"/> <b>Fee Transmittal Form</b> (e.g., PTO/SB/17) <small>(Submit an original, and a duplicate for fee processing)</small></p> <p>2. <input type="checkbox"/> <b>Applicant claims small entity status.</b> <small>See 37 CFR 1.27.</small></p> <p>3. <input checked="" type="checkbox"/> <b>Specification</b> <small>[Total Pages <b>23</b>]</small> <small>(preferred arrangement set forth below)</small></p> <ul style="list-style-type: none"><li>- Descriptive title of the invention</li><li>- Cross Reference to Related Applications</li><li>- Statement Regarding Fed sponsored R &amp; D</li><li>- Reference to sequence listing, a table, or a computer program listing appendix</li><li>- Background of the Invention</li><li>- Brief Summary of the Invention</li><li>- Brief Description of the Drawings (if filed)</li><li>- Detailed Description</li><li>- Claim(s)</li><li>- Abstract of the Disclosure</li></ul> <p>4. <input checked="" type="checkbox"/> <b>Drawing(s)</b> (35 U.S.C. 113) <small>[Total Sheets <b>5</b>]</small></p> <p>5. <b>Oath or Declaration</b> <small>[Total Pages <b>3</b>]</small></p> <p>a. <input type="checkbox"/> Newly executed (original or copy)</p> <p>b. <input type="checkbox"/> Copy from a prior application (37 CFR 1.63(d)) <small>(for continuation/divisional with Box 18 completed)</small></p> <p>i. <input type="checkbox"/> <b>DELETION OF INVENTOR(S)</b> <small>Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).</small></p> <p>6. <input type="checkbox"/> <b>Application Data Sheet.</b> See 37 CFR 1.76</p>		<p>7. <input type="checkbox"/> <b>CD-ROM or CD-R</b> in duplicate, large table or Computer Program (Appendix)</p> <p>8. <b>Nucleotide and/or Amino Acid Sequence Submission</b> <small>(if applicable, all necessary)</small></p> <p>a. <input type="checkbox"/> <b>Computer Readable Form (CRF)</b></p> <p>b. <b>Specification Sequence Listing on:</b></p> <p>i. <input type="checkbox"/> <b>CD-ROM or CD-R</b> (2 copies); or</p> <p>ii. <input type="checkbox"/> <b>Paper</b></p> <p>c. <input type="checkbox"/> <b>Statements verifying identity of above copies</b></p>	
<b>ACCOMPANYING APPLICATION PARTS</b>			
<p>9. <input type="checkbox"/> <b>Assignment Papers</b> (cover sheet &amp; document(s))</p> <p>10. <input type="checkbox"/> <b>37 CFR 3.73(b) Statement</b> <input type="checkbox"/> <b>Power of Attorney</b> <small>(when there is an assignee)</small></p> <p>11. <input type="checkbox"/> <b>English Translation Document</b> (if applicable)</p> <p>12. <input checked="" type="checkbox"/> <b>Information Disclosure Statement (IDS)/PTO-1449</b> <input checked="" type="checkbox"/> <b>Copies of IDS Citations</b></p> <p>13. <input type="checkbox"/> <b>Preliminary Amendment</b></p> <p>14. <input checked="" type="checkbox"/> <b>Return Receipt Postcard (MPEP 503)</b> <small>(Should be specifically itemized)</small></p> <p>15. <input type="checkbox"/> <b>Certified Copy of Priority Document(s)</b> <small>(if foreign priority is claimed)</small></p> <p>16. <input type="checkbox"/> <b>Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i).</b> Applicant must attach form PTO/SB/35 or its equivalent.</p> <p>17. <input checked="" type="checkbox"/> <b>Other:</b> Request For Early Publication</p>			
<p>18. If a <b>CONTINUING APPLICATION</b>, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:</p> <p><input type="checkbox"/> Continuation <input type="checkbox"/> Divisional <input type="checkbox"/> Continuation-in-part (CIP) of prior application No.: _____</p> <p>Prior application information: Examiner _____ Group / Art Unit: _____</p> <p><b>For CONTINUATION OR DIVISIONAL APPS only:</b> The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.</p>			
<b>19. CORRESPONDENCE ADDRESS</b>			
<p><input checked="" type="checkbox"/> <b>Customer Number:</b> 35684 or <input type="checkbox"/> Correspondence address below</p>			
<b>Name</b>		Michael S. Gzybowski	
		BUTZEL LONG	
<b>Address</b>		350 South Main Street	
		Suite 350	
<b>City</b>	Ann Arbor	<b>State</b>	MI
		<b>Zip Code</b>	48104
<b>Country</b>	USA	<b>Telephone</b>	734.995.3110
		<b>Fax</b>	734.995.1777
<b>Name (Print/Type)</b>		<b>Registration No. (Attorney/Agent)</b>	
Michael S. Gzybowski		32,816	
<b>Signature</b>		<b>Date</b>	
[Signature]		April 8, 2004	

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

22763 U.S. PTO  
040804

# FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) \$1,210.00

## Complete if Known

Application Number	Unknown
Filing Date	April 8, 2004
First Named Inventor	John KITCHING, et al
Examiner Name	Unknown
Art Unit	Unknown
Attorney Docket No.	1251051-0006

## METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit Account Number 12-2136

Deposit Account Name BUTZEL LONG

The Director is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayments

☒ Charge any additional fee(s) or any underpayment of fee(s)

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

## FEE CALCULATION

### 1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	770.00
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	
SUBTOTAL (1)					(\$ 770.00)

### 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Extra Claims		Fee from below		Fee Paid
Total Claims				
23	-20** = 3	X	18.00	54.00
Independent Claims	4	-3** = 1	X	86.00
Multiple Dependent				

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$) \$140.00

\*\*or number previously paid, if greater; For Reissues, see above

## FEE CALCULATION (continued)

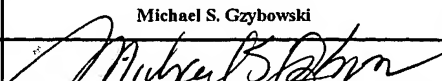
### 3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non - English specification	
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR § 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Statement	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	
Other fee (specify) Request For Early Publication					300.00

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$) \$300.00

## SUBMITTED BY

Name (Print/Type)	Michael S. Gzybowski	Registration No. (Attorney/Agent)	32,816	Telephone	734.995.3110
Signature		Date	April 8, 2004		

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

"EXPRESS MAIL" COVER LETTER  
U.S. PATENT APPLICATIONS

Date: April 8, 2004

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Re: Application for United States Letters Patent

APPLICANTS: John KITCHING, Leo HOLLBERG, Li-Anne LIEW,  
Svenja KNAPPE, John MORELAND, Volodja VELICHANSKI, and  
Hugh ROBINSON

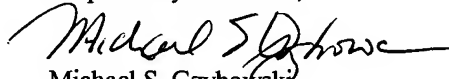
TITLE OF INVENTION: MICROMACHINED ALKALI-ATOM VAPOR CELLS AND METHOD  
OF FABRICATION

Sir:

Forwarded herewith is the above-identified application, consisting of the following:

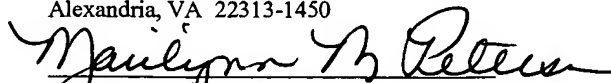
Express Mail Cover Letter (Certificate of Mailing)  
Certificate of Mailing by "Express Mail"  
Utility Patent Application Transmittal  
New Specification (17 pages), Claims (5 pages) and Abstract (1 page)  
5 Sheets Drawings  
Declaration and Power of Attorney  
Request For Early Publication  
Information Disclosure Statement  
PTO Form 1449 (with copies of cited references)  
Fee Transmittal  
Return Post Card

Respectfully submitted,

  
Michael S. Gzybowski  
Reg. No. 32,816  
Attorney for Applicant

BUTZEL LONG  
350 South Main Street  
Suite 300  
Ann Arbor, MI 48104  
734-995-3110 (ph)

"EXPRESS MAIL" Mailing No. EL 699 957 895 US  
Date of Deposit: April 8, 2004  
I hereby certify that this paper is being deposited with  
The United States Postal Service "EXPRESS MAIL  
POST OFFICE TO ADDRESSEE" service under  
37 CFR 1.10 on the date indicated above and is addressed  
to the Commissioner for Patents, P.O. Box 1450,  
Alexandria, VA 22313-1450

  
Marilynn M. Peterson

**CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)**Applicant(s): **John KITCHING, et al**

Docket No.

**121051-0006**

Serial No.

**Unknown**

Filing Date

**April 8, 2004**

Examiner

**Unknown**

Group Art Unit

**Unknown**Invention: **MICROMACHINED ALKALI-ATOM VAPOR CELLS AND METHOD OF FABRICATION**

I hereby certify that the following correspondence:

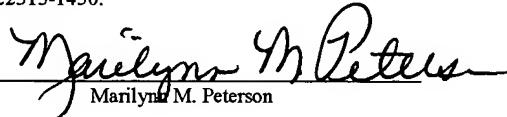
**UTILITY PATENT APPLICATION***(Identify type of correspondence)*

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

**April 8, 2004***(Date)***Marilynn M. Peterson***(Typed or Printed Name of Person Mailing Correspondence)**(Signature of Person Mailing Correspondence)***EL 699 957 895 US***("Express Mail" Mailing Label Number)***Note: Each paper must have its own certificate of mailing.**

PATENT APPLICATION

*IN THE UNITED STATES PATENT AND TRADEMARK OFFICE*

<i>Group</i>		}	<u>Certificate Under 37 CFR 1.10</u>
<i>Art Unit:</i>	Unknown	}	
		}	'EXPRESS MAIL' MAILING LABEL NO:
		}	
<i>Attorney</i>		}	<u>EL 699 957 895 US</u>
<i>Docket No.:</i>	121051-0006	}	
		}	DATE OF DEPOSIT: <u>April 8, 2004</u>
<i>Applicants:</i>	John KITCHING, Leo HOLLBERG, Li-Anne LIEW, Svenja KNAPPE, John MORELAND, Volodja VELICHANSKI, and Hugh ROBINSON	}	I HEREBY CERTIFY THAT THIS PAPER OR FEE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE "EXPRESS MAIL POST OFFICE TO ADDRESS" SERVICE UNDER 37 CFR 1.10 ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO THE COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450.
<i>Invention:</i>	MICROMACHINED ALKALI-ATOM VAPOR CELLS AND METHOD OF FABRICATION	}	
		}	 Marilyn M. Peterson
<i>Serial No:</i>	Unknown	}	
<i>Filing Date:</i>	April 8, 2004	}	
<i>Examiner:</i>	Unknown	}	

REQUEST FOR EARLY PUBLICATION

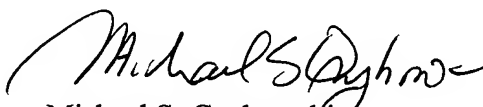
Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants wish to request Early Publication of the above-referenced patent application under 35 U.S.C. § 122.

Please charge required fee of \$300.00 due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 12-2136 and please credit any excess fees to such deposit account.

Respectfully submitted,

  
Michael S. Gzybowski  
Reg. No. 32,816

BUTZEL LONG  
350 South Main Street  
Suite 300  
Ann Arbor, Michigan 48104  
(734) 995-3110